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Graded Quiz: SQL Date Time Functions

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1. Which of the following is not a date-time function in PostgreSQL?1 / 1 point

- ☐ CURRENT_DATE
- ☒ CURRENT_DAY
- ☐ TO_DATE
- ☐ CURRENT_TIME

✔ Correct

Correct! There is no date-time function called CURRENT_DAY in PostgreSQL. If you run this in PgAdmin, it will throw up an error.

2. How many tables are in the employees database used in this project? (Please enter a numeric answer)1 / 1 point

9

✔ Correct

Correct! I have pre-installed the employees database for the purpose of this project. This database is an excerpt from the employees database hosted freely on GitHub. Also, the **database contains nine (9) tables** namely, employees, departments, departments employees shorten as dept_emp, salaries, dept_manager, departments_dup, dept_manager_dup table, customers and sales table.

3. Which of these date-time functions can take an optional precision parameter? (Select all that apply)1 / 1 point

☒ CURRENT_TIME

✔ Correct

Correct! CURRENT_TIME optionally takes a precision parameter, which causes the result to be rounded to that many fractional digits in the seconds field.

☐ timeofday()

☐ CURRENT_DATE

☒ CURRENT_TIMESTAMP

✔ Correct

Correct! CURRENT_TIMESTAMP optionally takes a precision parameter, which causes the result to be rounded to that many fractional digits in the seconds field.

4. Write a query to retrieve a list of the current age of all employees in the employees database.1 / 1 point

☐

1 SELECT birth_date, AGE(birth_date, CURRENT_DATE) AS Age

2 FROM employees;

☒

1 SELECT birth_date, AGE(CURRENT_DATE, birth_date) AS Age

2 FROM employees;

☐

1 SELECT birth_date, AGE(birth_date, CURRENT_DATE) AS Age,

2 FROM employees;

☐

1 SELECT birth_date, AGE(birth_date - CURRENT_DATE) AS Age

2 FROM employees;

✔ Correct

Correct! This query retrieves a list of the birth dates and the current age of all employees in the employees database.

5. Which of the following keywords is used to initialize or start a transaction block in PostgreSQL?1 / 1 point

- ☐ INITIALIZE;
- ☐ START;
- ☒ BEGIN;
- ☐ INIT;

✔ Correct

Correct! BEGIN initiates or starts a transaction block, that is, all statements after a BEGIN command will be executed in a single transaction until an explicit COMMIT or ROLLBACK is given.

6. You can only sort the result or output of a query in descending order.1 / 1 point

- ☐ Yes
- ☒ No
- ☐ Maybe

✔ Correct

Correct! The ORDER BY keyword is used to sort the result-set in ascending or descending order. The ORDER BY keyword sorts the records in ascending order by default. To sort the records in descending order, use the DESC keyword.

7. Write a query to extract the day of the month from the current date.1 / 1 point

☐

1 SELECT EXTRACT(DAY from CURRENTDATE);

☐

1 SELECT EXTRACT(DATE from CURRENT_DATE);

☐

1 SELECT EXTRACT(DD from CURRENT_DATE);

☒

1 SELECT EXTRACT(DAY from CURRENT_DATE);

✔ Correct

Correct! This query returns the day of the month (as a double-precision value) using the EXTRACT function.

8. Which of the following is a valid field name for the extract function? (Select all that apply)1 / 1 point

☒ day

✔ Correct

Correct! This is a valid field name that can be passed into the extract function as an argument.

☒ microseconds

✔ Correct

Correct! This is a valid field name that can be passed into the extract function as an argument.

☒ century

✔ Correct

Correct! This is a valid field name that can be passed into the extract function as an argument.

- ☒ year
- ☒ Correct

Correct! This is a valid field name that can be passed into the extract function as an argument.
- ☒ isoyear
- ☒ Correct

Correct! This is a valid field name that can be passed into the extract function as an argument.
- ☒ millenium
- ☒ Correct

Correct! This is a valid field name that can be passed into the extract function as an argument.

9. Write a query using the **EXTRACT** function to retrieve a list of the current age of all employees. Also, concatenate ' **years**' to each age returned.

1 / 1 point

- ☐

```
1 SELECT birth_date,
2 (EXTRACT(YEAR FROM birth_date) - EXTRACT(YEAR FROM CURRENT_DATE)) || ' years' AS emp_age
3 FROM employees;
```
- ☐

```
1 SELECT birth_date
2 (EXTRACT(YEAR FROM CURRENT_DATE) - EXTRACT(YEAR FROM birth_date)) || ' years' AS emp_age
3 FROM employees;
```
- ☒

```
1 SELECT birth_date,
2 (EXTRACT(YEAR FROM CURRENT_DATE) - EXTRACT(YEAR FROM birth_date)) || ' years' AS emp_age
3 FROM employees;
```
- ☐

```
1 SELECT birth_date,
2 (EXTRACT(YEAR FROM CURRENT_DATE) - EXTRACT(YEAR FROM birth_date)) AS emp_age
3 FROM employees;
```
- ☒ Correct

Correct! This query correctly retrieves the birth dates and age in years of all employees using the **EXTRACT** function.

10. Which of these **EXTRACT** fields returns the number of seconds between two dates?

1 / 1 point

- ☐ TIMEZONE_SECOND
- ☐ TIMEZONE
- ☐ MINUTE
- ☒ EPOCH
- ☒ Correct

Correct! **EPOCH** is a measure of time represented by the **number of seconds** since midnight on January 1, 1970 (UTC).

11. Which function can be used to convert strings to date in PostgreSQL?

1 / 1 point

- ☐ TODATE()
- ☐ TO_CHAR()
- ☒ TO_DATE()
- ☐ ISFINITE()
- ☒ Correct

Correct! The **TO_DATE** function in PostgreSQL is used to converting strings into dates. Its syntax is TO_DATE(text, text) and the return type is a date.

12. What are the two arguments that the **TO_CHAR()** function takes as input?

1 / 1 point

- ☒ value and format_mask
- ☐ format_task and value
- ☐ source and format_mask
- ☐ value and timestamp
- ☒ Correct

Correct! **TO_CHAR()** function converts a number or date to a string. Often you don't want to show the full raw **TIMESTAMP**, but rather a nicely formatted, potentially truncated version. Typically, it is written as **TO_CHAR(value, format_mask)**.

13. What is the correct format_mask to change this string '**12-31-2019**' to the proper SQL date format?

1 / 1 point

- Hint: **12 is the month, 31 is the day, and 2019 is the year**

☒ MM-DD-YYYY

☐ Month-DD-YY

☐ DD-MM-YY

☐ MMDDYYYY

☒ Correct

Correct! The month in the given date is a numeric value, so the appropriate format is **MM**. The day is also numeric, therefore **DD** is the appropriate format. The year is **YYYY**. Also, it is important to put the hyphen in between in the format mask.
14. Write a query to change this string '**Thursday, Feb, 25 2019**' to the correct SQL date format.

1 / 1 point
- ☒

```
1 SELECT TO_DATE('Thursday, Feb, 25 2021', 'Day, Mon, DD YYYY');
```

☐

```
1 SELECT TO_CHAR('Thursday, Feb, 25 2021', 'Day, Mon, DD YYYY');
```

☐

```
1 SELECT TO_DATE('Day, Mon, DD YYYY', 'Thursday, Feb, 25 2021');
```

☐

```
1 SELECT TO_DATE('Thursday, Feb, 25 2021', 'Mon, DD YYYY');
```

☒ Correct

Correct! This query will change '**Thursday, Feb, 25 2021**' to **2021-02-25**, which is the correct date format. The query specifies the correct format mask for each date entity.
15. What will be the output of this query?

1 / 1 point
- ```
1 SELECT EXTRACT(MONTH FROM ship_date) AS sales_month,
2 SUM(sales) AS monthly_total
3 FROM sales
4 GROUP BY sales_month
5 ORDER BY sales_month;
```

☐ The query above retrieves only a list of the month in the sales table.

☐ The query above retrieves a list of the month of sales and the sum of the total sales for each month in the sales table. Then, it sorts the result by the month of sales in descending order.

☒ The query above retrieves a list of the month of sales and the sum of the total sales for each month in the sales table. Then, it sorts the result by the month of sales in ascending order.

☒ Correct

Correct! The query above retrieves a list of the month of sales and the sum of the total sales for each month in the sales table. Then, it sorts the result by the month of sales in ascending order.

https://www.coursera.org/learn/sql-date-time-functions/exam/FEJPQ/graded-quiz-sql-date-time-functions/view-attempt

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